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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/609,630 | 07/01/2003 | Jun Moroo | 1086.1183 | 8592 |

21171 7590 10/18/2006

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| EXAMINER |
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TABATABAI, ABOLFAZL

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| ART UNIT | PAPER NUMBER |
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2624

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,630

Applicant(s)

MOROO ET AL.

Examiner

Abolfazl Tabatabai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.-

2. Claims 1-3, 6-8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uoshiura et al (U. S. 6,131,162) in view of Hirai (U. S. 2002/00833324 A1).

Regarding claim 1, Yoshiura discloses an image data processing apparatus comprising:

a first apparatus which enters image data with embedded stegano data that cannot be recognized visually (column 32, lines 1-10), the first apparatus sending the entered image data to the outside and receiving the result of processing from the outside (column 29, lines 17-27) for holding the same (column 17, lines 13-17 and column 18, lines 10-21).

However, Yoshiura is silent about the specific details regarding the step of:

a second apparatus which effects data processing on the image data received from the first apparatus to acquire stegano data, the second apparatus

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sending the acquired stegano data as the result of processing to the first apparatus.

In the same field of endeavor (image processing), however, Hirai discloses information embedding apparatus and method, information processing apparatus and method, content processing apparatus and method, monitoring apparatus and method, and storage media comprising the step of:

a second apparatus which effects data processing on the image data received from the first apparatus to acquire stegano data [page 4, paragraph (0059 and page 5, paragraph (0061)], the second apparatus sending the acquired stegano data as the result of processing to the first apparatus [page 6 paragraphs (0087 and (0089)].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use sending the acquired stegano data as the result of processing to the first apparatus as taught by Hirai in the system of Uoshiura because Hirai provides an improved digital watermark technique for writing new digital watermarks without the loss of quality of the original content and also for achieving content protection while ensuring the convenience of secondary users of content with digital marks [page 2, paragraphs (0020) and (0021)].

Regarding claim 2, Yoshiura discloses the image data processing apparatus according to claim 1, wherein the first apparatus comprises: an image data input unit which enters image data with stegano data embedded (column 32, lines 1-10); a data sending unit which sends the entered image data to the outside (column 17, lines 7-15); a result data receiving unit which receives the

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processed result data from the second apparatus (column 29, lines 17-27); and a result holding unit which holds the received result data (column 18, lines 10-21).

However, Yoshiura is silent about the specific details regarding the step of:

the second apparatus comprises: an image data receiving unit which receives image data from the first apparatus, a data holding unit which holds the received image data; an image data processing unit which effects processing on image data to acquire stegano data; and a result data sending unit which sends the acquired stegano data as result data to the first apparatus, and wherein a communication path always or intermittently connects the first apparatus and the second apparatus.

In the same field of endeavor (image processing), however, Hirai discloses information embedding apparatus and method, information processing apparatus and method, content processing apparatus and method, monitoring apparatus and method, and storage media comprising the step of:

the second apparatus comprises: an image data receiving unit which receives image data from the first apparatus [page 4, paragraph (0059 and page 5, paragraph (0061)], a data holding unit which holds the received image data [page 6 paragraphs (0099 and (0154)]; an image data processing unit which effects processing on image data to acquire stegano data; and a result data sending unit which sends the acquired stegano data as result data to the first apparatus [page 6 paragraphs (0087 and (0089)], and wherein a communication path always or intermittently connects the first apparatus and the second apparatus [page 8 paragraph (0113)].

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use sending the acquired stegano data as the result of processing to the first apparatus and communication path as taught by Hirai in the system of Uoshiura because Hirai provides an improved digital watermark technique for writing new digital watermarks without the loss of quality of the original content and also for achieving content protection while ensuring the convenience of secondary users of content with digital marks [page 2, paragraphs (0020) and (0021)].

Claim 3 is similarly analyzed as claim 1 above.

Regarding claim 6, Yoshiura discloses the image data processing apparatus according to claim 1, wherein the first apparatus compresses image data entered and held, for sending to the second apparatus, and wherein the second apparatus restores the compressed image data received from the first apparatus, for effecting image processing (column 3, lines 1-3).

Claim 7 is similarly analyzed as claim 1 above.

Claim 8 is similarly analyzed as claim 3 above.

Claim 11 is similarly analyzed as claim 6 above.

Claim 12 is similarly analyzed as claim 7 above.

3. Claims 4, 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uoshiura et al (U. S. 6,131,162) and Hirai (U. S. 2002/00833324 A1) as applied to claims 1, 7 and further in view of Stach et al (U. S. 7,068,809 B2).

Regarding claim 4, Yoshiura and Hirai are silent about the specific details

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regarding the image data processing apparatus according to claim 1, wherein the first apparatus includes a pre-processing unit which executes pre-processing of the entered image data, the pre-processing being part of image processing to be performed on the side of the second apparatus.

In the same field of endeavor (image processing), however, Stach discloses segmenting digital watermarking comprises a pre-processing unit which executes pre-processing of the entered image data, the pre-processing being part of image processing to be performed on the side of the second apparatus (column 3, lines 41-46).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use pre-processing unit as taught by Stach in the system of Uoshiura because Stach provides an improved digital watermark technique which has ability to hide the auxiliary data more effectively by adapting the watermark signal to the perceptual attributes of a region.

Regarding claim 5, Yoshiura and Hirai are silent about the specific details regarding the image data processing apparatus according to claim 1, wherein the first apparatus splits the entered image data into a plurality of areas, to send some of the split image data to the second apparatus, and wherein the second apparatus effects image processing on the some image data received from the first apparatus, the second apparatus, if stegano data cannot be acquired, sequentially requesting the first apparatus to make a re-transfer, for image processing, of image data of the remaining split areas until the second apparatus acquires stegano data.

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In the same field of endeavor (image processing), however, Stach discloses segmenting digital watermarking comprises the first apparatus splits the entered image data into a plurality of areas, to send some of the split image data to the second apparatus, and wherein the second apparatus effects image processing on the some image data received from the first apparatus, the second apparatus, if stegano data cannot be acquired, sequentially requesting the first apparatus to make a re-transfer, for image processing, of image data of the remaining split areas until the second apparatus acquires stegano data (abstract and column 6, lines 12-20).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use segmentation process as taught by Stach in the system of Uoshiura because Stach provides an improved digital watermark technique which has ability to hide the auxiliary data more effectively by adapting the watermark signal to the perceptual attributes of a region.

Claim 9 is similarly analyzed as claim 4 above.

Claim 10 is similarly analyzed as claim 5 above.

Other prior art Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ehrmann et al (U S 7,013,023 B2) disclose method and device for sending and receiving digital images using an image watermark for decoding.

Tian et al (U S 6,683,966 B1) disclose watermarking recursive hashes into

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frequency domain regions.

Fujihara et al (U S 7,050,604 B2) disclose image protection technique.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (571) 272-7458.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Jingge Wu, can be reached at (571) 272-7429. The fax phone number for organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abolfazl Tabatabai

Patent Examiner

Technology Division 2624

October 4, 2006


JINGGE WU
PRIMARY EXAMINER